PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
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SCIENTIFIC-ATLANTA, INC.
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LAWRENCEVILLE, GA 30044

PCT
Deadline 12/28/03

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing *(day/month/year)* **28 OCT 2003**	

Applicant's or agent's file reference	REPLY DUE
F-7314-PC	within 2 months/days from the above date of mailing

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US02/38777	05 December 2002 (05.12.2002)	06 December 2001 (06.12.2001)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): H04N 7/16, 5/91 and US Cl.: 725/142; 386/70

Applicant

SCIENTIFIC-ATLANTA, INC.

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1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

   I   ☒ Basis of the opinion.

   II ☐ Priority

   III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability.

   IV ☐ Lack of unity of invention

   V   ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

   VI ☐ Certain documents cited

   VII ☐ Certain defects in the international application

   VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

   When?   See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

   How?   By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

   Also   For an additional opportunity to submit amendments, see Rule 66.4.
          For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
          For an informal communication with the examiner, see Rule 66.6.

   If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary
   examination report must be established according to Rule 69.2 is: 06 April 2004 (06.04.2004)

Name and mailing address of the IPEA/US	Authorized officer
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Andrew Faile Telephone No. (703) 305-4700

WRITTEN OPINION

I. Basis of the opinion

1. With regard to the elements of the international application:*

    ☐ the international application as originally filed

    ☒ the description:
    pages 1-45 , as originally filed
    pages NONE , filed with the demand
    pages NONE , filed with the letter of

    ☒ the claims:
    pages NONE , as originally filed
    pages NONE , as annexed (together with any statement) under Article 19
    pages 46-52 , filed with the demand
    pages NONE , filed with the letter of

    ☒ the drawings:
    pages 1-26 , as originally filed
    pages NONE , filed with the demand
    pages NONE , filed with the letter of

    ☐ the sequence listing part of the description:
    pages NONE , as originally filed
    pages NONE , filed with the demand
    pages NONE , filed with the letter of

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

    ☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

    ☐ the language of publication of the international application (under Rule 48.3(b)).

    ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

    ☐ contained in the international application in printed form.

    ☐ filed together with the international application in computer readable form.

    ☐ furnished subsequently to this Authority in written form.

    ☐ furnished subsequently to this Authority in computer readable form.

    ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

    ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

    ☐ the description, pages NONE

    ☐ the claims, Nos. NONE

    ☐ the drawings, sheets/fig NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	2-16, 21-24, 26-40, and 45-48	YES
	Claims	1, 17-20, 25, and 41-44	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-48	NO
Industrial Applicability (IA)	Claims	1-48	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS
Please See Continuation Sheet

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

TIME LIMIT:
The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V. 2. Citations and Explanations:
Claims 1, 17-20, 25, and 41-44 lack novelty under PCT Article 33(2) as being anticipated by U.S. Patent 5,371,551 to Logan et al.

Regarding claims 1 and 25, Logan teaches a broadcast recording and playback device that concurrently records and plays programming simultaneously. Logan teaches memory for storing logic in order to execute commands of the microprocessor (fig. 1, label 11) (col. 3, ll. 25-33). Logan teaches memory, which is buffer space used for continuously buffering media (abstract). Logan does not explicitly teach logic representing the instances as a management file. The examiner notes that the system of Logan clearly must represent the media in the buffers in order to properly manage the circular buffers thereby preventing over-writing data.

Regarding claims 17-18 and 41-42, Logan teaches receiving analog media (fig. 1) at the device (which equates to a communication interface and a consumer electronics device).

Regarding claims 19-20 and 43-44, Logan teaches receiving digital media (fig. 1) at the device (which equates to a communication interface and from a remote server) (col. 4, ll. 46-56).

Claims 2, 5-12, 21-24, 26, 29-36, and 45-48 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent 5,371,551 to Logan et al.

Regarding claims 2 and 26, Logan is silent on tracking the duration of the buffered media. Further, the examiner notes that flags denoting the status of the circular buffers are well known in the art. Therefore, it lacks an inventive step to track the duration of the buffered media in the circular buffers in order to provide data integrity by prevent overwriting data.

Regarding claims 5-7 and 29-31, Logan teaches a start and end time for recording (col. 2, ll. 46-52). Logan clearly teaches tracking the buffered data in order to prevent buffer underrun and overrun problems. Further, one would readily recognize that the duration of a program can be determined from subtracting the end time from the start time of the program.

Regarding claims 8-10 and 32-34, Logan is silent on a data structure including guide data, start time, playback location, status, and file name. The use of data structures (which includes linked lists and linked lists of pointers) for data are well known in the art. Therefore, it lacks an inventive step to use a data structure, link lists, and linked lists of pointers for storing guide data, start time, playback location, status, and a file name in order to organize and maintain information in the device.

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claims 11 and 35, Logan is silent on using and storing the scheduled stop time of the media to determine when to close the management file for the ended media and open a new file for the next instance. Closing and opening sessions (e.g. media instances) are well known in the art. Therefore, it lacks an inventive step to close and open files for new instances in order to efficiently process information.

Regarding claims 12 and 36, Logan is silent on a start time as the internal clock. Use of the internal clock is well known. Therefore, it lacks an inventive step to use the internal clock of a device as the start time in order to provide a reference time thereby increasing robustness.

Regarding claims 21-22 and 45-46, Logan teaches buffering from a processing unit (claimed local device) (col. 3, ll. 8-11), but is silent on a local network. Local networks are well known in the art. It lacks an inventive step to use a local network in order to make the device more diverse and practical in other configurations.

Regarding claims 23 and 47, Logan is silent on a flag denoting media as temporary. Flags are well known in the art. It lacks an inventive step to use flags as denoting temporary media in order to facilitate proper management of the data in the system.

Regarding claims 24 and 48, Logan is silent on a flag denoting media as permanent. Flags are well known in the art. It lacks an inventive step to use flags as denoting permanent media in order to facilitate proper management of the data in the system.

Claims 3-4, 13-16, 27-28, and 37-40 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent 5,371,551 to Logan et al. in view of U.S. Patent 5,701,383 to Russo et al.

Regarding claims 3-4 and 27-28, Logan is silent on a hard disk, which is taught by Russo (col. 2-3, ll. 38-6). Accordingly, it lacks an inventive step to use a hard disk as taught by Russo in order to store the data permanently. Logan teaches real-time playback (col. 3, ll. 46-60).

Regarding claims 13 and 37, the combination of Logan and Russo teaches storing data on hard drives, which clearly can identify the recorded data.

Regarding claims 14-16 and 38-40, Logan and Russo are silent on randomly generated names, names using guide data, channel number, title, and source. Use of randomly generated names, names using guide data, channel number, title, and source are well known in the art. Therefore, it lacks an inventive step to use randomly generated names, names using guide data, channel number, title, and source in order to properly identify the recorded programs